

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 2, 2019/2020

**ERT 3056 – INTRODUCTION TO CIM**  
(RE)

5 MARCH 2020  
2.30 p.m. – 4.30 p.m.  
(2 Hours)

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### INSTRUCTION TO STUDENTS

1. This Question paper consists of 3 pages including cover page with 4 Questions only.
2. Attempt all **FOUR** questions. All questions carry equal marks and the distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

**Question 1**

- a) By means of a diagram, differentiate between '*Subtract*', '*Union*' and '*Intersection*' features used in Boolean operations. Explain your answer briefly.

[15 marks]

- b) Illustrate the various types of surface classification.

[10 marks]

**Question 2**

- a) With the aid of a diagram, illustrate how integrating Rapid Prototyping Technologies can decrease cost and time in a typical manufacturing sector.

[15 marks]

- b) Illustrate the working principal of a 3-D printer.

[10 marks]

**Continued...**

**Question 3**

- a) By means of a neat sketch, differentiate the **THREE** types of work-holding methods that are used in CNC machining centres.

*(Note: Provide their working principles based on your sketch provided)*

**[15 marks]**

- b) One of the support system for Computer Numerical Control (CNC) machining is the '*Chip Removal*' system. Illustrate the working principle of '*Chip Removal*' system.

**[10 marks]**

**Question 4**

- a) By means of a flowchart, illustrate the scopes of Product Lifecycle Management (PLM). In your flowchart, show the preferred time frame to launch a product.

**[10 marks]**

- b) Illustrate the working principle of an Automatic Storage and Retrieval System (AS/RS). In your sketch, state the major components used to build an AS/RS system.

**[15 marks]**

**End of Paper**